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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
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CHUI, MEI PING

ART UNIT	PAPER NUMBER
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1616

MAIL DATE	DELIVERY MODE
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06/22/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/531,830	<b>Applicant(s)</b> HACKER ET AL.	
	<b>Examiner</b> MEI-PING CHUI	<b>Art Unit</b> 1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 8, 11, 12, 14-18, 20, 21 and 30-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8, 11-12, 14-18, 20-21, 30-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/09/2009 has been entered.

### ***Status of Action***

Receipt of Amendments/Remarks filed on 04/09/2009 is acknowledged. Claims 8, 11-12, 14-18, 20-21, 30-36 are pending in this application. Claims 8, 14-17 have been amended; claims 1-7, 9-10, 13, 19, 22-29 have been cancelled; claims 11-12, 18, 20-21, 30-36 are previously presented.

### ***Status of Claims***

Accordingly, claims 8, 11-12, 14-18, 20-21, 30-36 are presented for examination on the merits for patentability.

### ***Response to Arguments***

Applicants' arguments filed on 04/09/2009 have been considered but are moot in view of the new grounds of rejection.

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***Claim Rejections - 35 USC § 112 second paragraph***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims **8, 11-12, 14-18, 20-21, 30-36** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims **8, 14** recite the phrase “wherein the one or more herbicide (A) are selected from....and agriculturally acceptable salts of aforementioned acidic compounds”, which the recitation lacks antecedent basis because the term “acidic compounds” is not recited in the precedent body of the claims.

Claims **11-12, 15-18, 20-21, 30-36** are also rejected because they depend from claim 8, and thus incorporate its limitation.

***Claim Rejection - 35 U.S.C. § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(b) that form the basis for the rejections under this section made in this Office action:

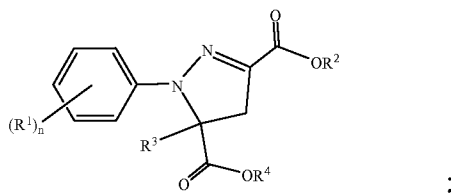
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 8, 11-12, 14-15, 21, 31-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Rosch et al. (U. S. Patent No. 5,700,758).**

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Instant claims are drawn to a method for increasing the weed control of aryloxyphenoxypropionate herbicide (**A**) by applying one or more aryloxyphenoxypropionate herbicide (**A**), simultaneously or separately, with a synergistic herbicidally effective amount of one or more compound (**B**) (see structure below):



in which:

- (i)  $R^1$  = identical or different, and are each halogen or (C<sub>1</sub>-C<sub>4</sub>)-haloalkyl;  
 $n$  = an integer from 1 to 3;  
 $R^2$  = hydrogen, (C<sub>1</sub>-C<sub>6</sub>)-alkyl; (C<sub>1</sub>-C<sub>4</sub>)-alkoxyl-(C<sub>1</sub>-C<sub>4</sub>)-alkyl; (C<sub>3</sub>-C<sub>6</sub>)-cycloalkyl; tri(C<sub>1</sub>-C<sub>4</sub>)-alkyl silyl or tri(C<sub>1</sub>-C<sub>4</sub>)-alkyl silylmethyl;  
 $R^3$  = hydrogen; (C<sub>1</sub>-C<sub>6</sub>)-alkyl; (C<sub>1</sub>-C<sub>6</sub>)-haloalkyl; (C<sub>2</sub>-C<sub>6</sub>)-alkenyl; (C<sub>2</sub>-C<sub>6</sub>)-alkynyl or (C<sub>3</sub>-C<sub>6</sub>)-cycloalkyl;  
 $R^4$  = hydrogen or (C<sub>1</sub>-C<sub>12</sub>)-alkyl; and
- (ii) the one or more aryloxyphenoxypropionate herbicide (**A**) is clodinafop-propargyl, diclofop-methyl or fenoxaprop-P-ethyl.

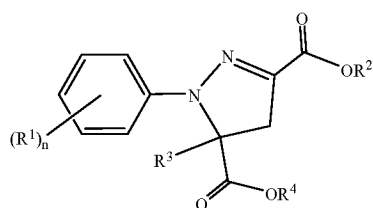
With respect to **claims 8, 11, 12, 33, 36**, Rosch et al. disclose a method of protecting useful crop plants, i.e. cereal crops (e.g. wheat, barley) or rice, against phytotoxic secondary effects of herbicides by applying a compound of the formula (I) to the plants, seeds of the plants or areas under cultivation, before, after or simultaneously, with a herbicide. Rosch et al. also disclose that it would be advantageous to use such mixture, which comprises the herbicide and the

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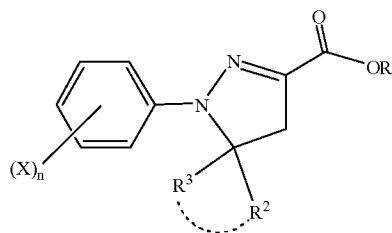
compound of formula (I), for the selective weed control in cereal crops (column 3, line 48-61; column 5, lines 25-27, 28-32; column 12, lines 52-53).

Rosch et al. disclose that the method comprises compounds of formula (I), which have the property of reducing or completely preventing phytotoxic secondary effects of herbicides when use in useful crops or plants without impairing the effectiveness of the herbicides against harmful plants; therefore, it enlarges the field of application of conventional herbicides by adding the safener compounds of the formula (I) (column 3, lines 48-56).

Rosch et al. then disclose the compounds of formula (I) have the chemical structures (see below), and it is noted that the substituents present in the compounds of formula (I) by Rosch et al. and the substituents present in the compounds (B), as instantly claimed, are (see column 16-17, claims 1-4, 6, 10-11, 13-15; column 19, claim 18; column 20, claims 24-25):

Substituent (instant compounds B)

R<sup>1</sup>  
R<sup>2</sup>  
R<sup>3</sup>  
CO<sub>2</sub>R<sup>4</sup>  
n

Substituent (by Rosch et al.)

X  
R<sup>1</sup>  
R<sup>2</sup> or R<sup>3</sup>  
R<sup>2</sup> or R<sup>3</sup>  
n

Rosch et al. disclose that the substituent:

**X** = radicals independently of one another are halogen or C<sub>1</sub>-C<sub>4</sub> haloalkyl;

**R<sup>1</sup>** = C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, tri(C<sub>1</sub>-C<sub>4</sub> alkyl)silyl, trimethyl-silylmethyl or

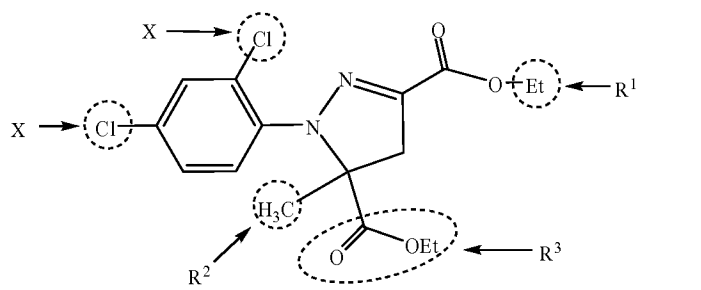
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C<sub>1</sub>-C<sub>6</sub>-alkoxy-C<sub>1</sub>-C<sub>6</sub>-alkyl;

**R<sup>2</sup>** and **R<sup>3</sup>** = independently hydrogen, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub>-alkenyl, C<sub>2</sub>-C<sub>6</sub>-alkynyl, C<sub>3</sub>-C<sub>6</sub>-cycloalkyl, C<sub>1</sub>-C<sub>6</sub>-haloalkyl and C<sub>1</sub>-C<sub>12</sub> alkyl;

**n** = 1 to 3.

More specifically, Rosch et al. disclose a structure of the compound of formula (I) (see: column 20, claim 28):



wherein the substituents of formula (I) are:

**(X)<sub>n</sub>** = 2, 4-dichloro;

**R<sup>1</sup>** = ethyl;

**R<sup>2</sup>** = methyl; and

**R<sup>3</sup>** = ethoxycarbonyl.

It is noted that the compound of formula (I) set forth above is a known safener, which is commonly referred as mefenpyr-diethyl or chemically named as ethyl 1-(2, 4-dichlorophenyl)-5-ethoxycarbonyl-5-methylpyrazoline-3-carboxylate, as evidenced by the Index of Common Names of Pesticides, obtained online via [www.alanwood.net/pesticides/index\\_cn\\_frame.html](http://www.alanwood.net/pesticides/index_cn_frame.html)). Therefore, Rosch et al. anticipates instant claim 12.

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With respect to the recitation of “a synergistically effective amount of one of more compounds (B)” in claim 8 (see lines 4-5), the prior art Rosch et al. disclose that the compounds of formula (I) set forth above (or named as the compounds (B) in the instant claim 8) is present from 0.005-10 kg (5 to 10,000 g) per hectare, and preferably between 0.01 to 5 kg (or 10 to 5000 g) per hectare (column 7, line 14). It is noted that the instant specification discloses the application rate of compound (B) can vary and is generally in the range from 1-500 g per hectare (see page 14, lines 5-7). Therefore, Rosch et al. anticipates the synergistic herbicidally effective amount (in the range from 5-500 g per hectare) of one or more compounds (B), based on the disclosure in the instant specification.

With respect to **claims 14-15, 21, 31-32, 34-35**, Rosch et al. disclose that the herbicides, whose phytotoxic secondary effects can be reduced by the compounds of formula (I), are the types of the (C<sub>1</sub>-C<sub>4</sub>)alkyl, (C<sub>2</sub>-C<sub>4</sub>)alkenyl or (C<sub>3</sub>-C<sub>4</sub>)alkynyl phenoxyphenoxy- and heteroaryloxyphenoxy carboxylates herbicides, as well as their structural analogs (column 4, lines 14-45).

More specifically, Rosch et al. disclose the herbicide is **fenoxaprop-P-ethyl** and the compound of formula (I) is **mefenpyr-diethyl** (column 18, lines 23-25, claim 15; column 20, claim 28).

Furthermore, Rosch et al. disclose that the weight ratio of the herbicide to the compound of formula (I) is preferably between 1:10 and 10:1, particularly between 1:2 and 10:1 (column 5, lines 17-19; column 17, claim 17). Therefore, Rosch et al. anticipates the weight ratio of the herbicide (A) and the compound (B), as claimed in instant claims 31-32, 34-35.



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Rosch et al. further disclose that the herbicide fenoxaprop-P-ethyl (or named as the herbicide (A) in instant claims 8 and 15) in combination with the compound of formula (I) (or named as the compound (B) in instant claims 8 and 15) is applied to the plants, to seeds of the plants or to the area under cultivation (column 18, lines 51-54, claim 15).

With respect to the recitation of the instant method is “for increasing weed control of aryloxyphenoxypropionate herbicide (A)”, Rosch et al. do not expressly disclose the method set forth above is used for increasing weed control of the aryloxyphenoxypropionate herbicide. However, Rosch et al. disclose that the utility of the compounds of formula (I) is to reduce the phytotoxicity of the herbicides toward useful crop plants, and at the same time, without impairing the effectiveness of the herbicides against harmful plants. Therefore, Rosch et al. imply that the utilization of the safener, i.e. mefenpyr-diethyl, with the conventional herbicides set forth above would help to expand the field of application of these herbicides to more types of useful crops and plants, and thus, would widen the spectrum of the weeds or undesirable plants that can be controlled, as evidenced by Davies, J. (The article of Safeners, Pesticide Outlook, February 2001, page 10-15).

Davies, J. discloses that herbicide safeners selectively protect crop plants from herbicide damage without reducing activity in target weed species. They are used to improve herbicide selectivity between crop and weed species and can be applied either as a mixture with the herbicide or can be applied separately with the herbicide. Davies, J. also discloses that herbicide safeners improve crop tolerance to herbicides, and provides a flexible method of improving herbicide selectivity for weed control (page 10: left column, section of: What is a herbicide safener; page 14, section of: Conclusion).

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Therefore, the method disclosed by Rosch et al. is inherently also for increasing the weed control of the herbicides, as the instant method.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

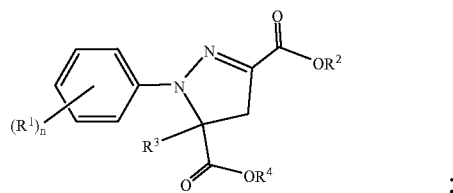
**Claims 16-18, 20, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosch et al. (U. S. Patent No. 5,700,758).**

### ***Applicants Claim***

Applicants claim a method for increasing the weed control of aryloxyphenoxypropionate herbicide (A) by applying one or more aryloxyphenoxypropionate herbicide (A), simultaneously

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or separately, with a synergistic herbicidally effective amount of one or more compound **(B)** (see structure below):



in which:

**R¹** = identical or different, and are each halogen or (C<sub>1</sub>-C<sub>4</sub>)-haloalkyl;

**n** = an integer from 1 to 3;

**R²** = hydrogen, (C<sub>1</sub>-C<sub>6</sub>)-alkyl; (C<sub>1</sub>-C<sub>4</sub>)-alkoxyl-(C<sub>1</sub>-C<sub>4</sub>)-alkyl; (C<sub>3</sub>-C<sub>6</sub>)-cycloalkyl; tri(C<sub>1</sub>-C<sub>4</sub>)-alkyl silyl or tri(C<sub>1</sub>-C<sub>4</sub>)-alkyl silylmethyl;

**R³** = hydrogen; (C<sub>1</sub>-C<sub>6</sub>)-alkyl; (C<sub>1</sub>-C<sub>6</sub>)-haloalkyl; (C<sub>2</sub>-C<sub>6</sub>)-alkenyl; (C<sub>2</sub>-C<sub>6</sub>)-alkynyl or (C<sub>3</sub>-C<sub>6</sub>)-cycloalkyl;

**R⁴** = hydrogen or (C<sub>1</sub>-C<sub>12</sub>)-alkyl; and

wherein the one or more aryloxyphenoxypropionate herbicide **(A)** is clodinafop-propargyl, diclofop-methyl or fenoxaprop-P-ethyl and the compound **(B)** is mefenpyr-diethyl.

***Determination of the scope and content of the prior art***  
***(MPEP 2141.01)***

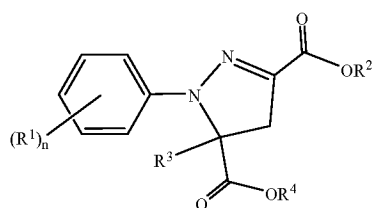
The teaching of Rosch et al. has been set forth above. Essentially, Rosch et al. teach a method of protecting useful crop plants, i.e. cereal crops (e.g. wheat, barley) or rice, against phytotoxic secondary effects of herbicides by applying a compound of the formula (I) to the plants, seeds of the plants or areas under cultivation, before, after or simultaneously, with a herbicide. Rosch et al. also teach that it would be advantageous to use such mixture, which

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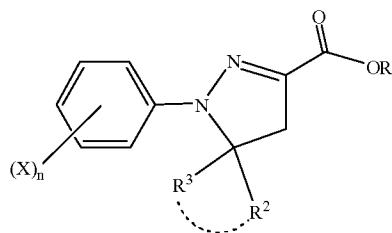
comprises the herbicide and the compound of formula (I) for the selective weed control in cereal crops (column 3, line 48-61; column 5, lines 25-27, 28-32; column 12, lines 52-53).

Rosch et al. teach that the method comprises compounds of formula (I), which have the property of reducing or completely preventing phytotoxic secondary effects of herbicides when use in useful crops or plants without impairing the effectiveness of the herbicides against harmful plants; therefore, it enlarges the field of application of conventional herbicides by adding the safener compounds of the formula (I) (column 3, lines 48-56).

Rosch et al. then teach the compounds of formula (I) have the chemical structures (see below), and it is noted that the substituents present in the compounds of formula (I) by Rosch et al. and the substituents present in the compounds (B), as instantly claimed, are (see column 16-17, claims 1-4, 6, 10-11, 13-15; column 19, claim 18; column 20, claims 24-25):

Substituent (instant compounds B)

R<sup>1</sup>  
R<sup>2</sup>  
R<sup>3</sup>  
CO<sub>2</sub>R<sup>4</sup>  
N

Substituent (by Rosch et al.)

X  
R<sup>1</sup>  
R<sup>2</sup> or R<sup>3</sup>  
R<sup>2</sup> or R<sup>3</sup>  
N

Rosch et al. teach that the substituent:

**X** = radicals independently of one another are halogen or C<sub>1</sub>-C<sub>4</sub> haloalkyl;

**R<sup>1</sup>** = C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, tri(C<sub>1</sub>-C<sub>4</sub> alkyl)silyl, trimethyl-silylmethyl or

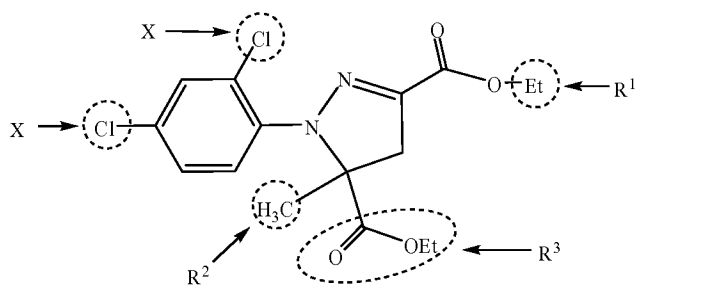
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C<sub>1</sub>-C<sub>6</sub>-alkoxy-C<sub>1</sub>-C<sub>6</sub>-alkyl;

**R<sup>2</sup>** and **R<sup>3</sup>** = independently hydrogen, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub>-alkenyl, C<sub>2</sub>-C<sub>6</sub>-alkynyl, C<sub>3</sub>-C<sub>6</sub>-cycloalkyl, C<sub>1</sub>-C<sub>6</sub>-haloalkyl and C<sub>1</sub>-C<sub>12</sub> alkyl;

**n** = 1 to 3.

More specifically, Rosch et al. teach a structure of the compound of formula (I) (see: column 20, claim 28):



wherein the substituents of the compound of formula (I) are:

**(X)<sub>n</sub>** = 2, 4-dichloro (where n = 2)

**R<sup>1</sup>** = ethyl;

**R<sup>2</sup>** = methyl; and

**R<sup>3</sup>** = ethoxycarbonyl.

It is noted that the compound of formula (I) set forth above is a known safener, which is commonly referred as mefenpyr-diethyl or chemically named as ethyl 1-(2, 4-dichlorophenyl)-5-ethoxycarbonyl-5-methylpyrazoline-3-carboxylate, as evidenced by the Index of Common Names of Pesticides, obtained online via [www.alanwood.net/pesticides/index\\_cn\\_frame.html](http://www.alanwood.net/pesticides/index_cn_frame.html)).

With respect to the recitation of “a synergistically effective amount of one of more compounds (B)” in claim 8 (see lines 4-5), the prior art Rosch et al. teach that the compounds of

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formula (I) set forth above (or named as the compounds (B) in the instant claim 8) is present from 0.005-10 kg (5 to 10,000 g) per hectare, and preferably between 0.01 to 5 kg (or 10 to 5000 g) per hectare (column 7, line 14). It is noted that the instant specification discloses the application rate of compound (B) can vary and is generally in the range from 1-500 g per hectare (see page 14, lines 5-7). Therefore, Rosch et al. meets the claimed limitation of the synergistic herbicidally effective amount of one or more compounds (B), based on the disclosure in the instant specification for the range from 1-500 g per hectare.

Rosch et al. teach that the suitable herbicides, whose phytotoxic secondary effects can be reduced by the compounds of formula (I), are the types of the (C<sub>1</sub>-C<sub>4</sub>)alkyl, (C<sub>2</sub>-C<sub>4</sub>)alkenyl or (C<sub>3</sub>-C<sub>4</sub>)alkynyl phenoxyphenoxy and heteroaryloxyphenoxy carboxylates herbicides, as well as their structural analogs (column 4, lines 14-45). More specifically, Rosch et al. teach that the herbicide is **fenoxaprop-P-ethyl** and the compound of formula (I) is **mefenpyr-diethyl** (column 18, lines 23-25, claim 15; column 20, claim 28). However, Rosch et al. teach that in addition to herbicides fenoxaprop-P-ethyl and fenoxaprop-ethyl, other herbicides such as diclofop-methyl (named as methyl 2-(4-(2, 4-dichlorophenoxy)phenoxy)propionate) and clodinafop-propargyl (named as propargyl 2-(4-(5-chloro-3-fluoropyridyl-2-oxy)phenoxy)propionate) are also suitable herbicides for use with the compound of formula (I) set forth above.

Rosch et al. further teach that the compound of formula (I), i.e. mefenpyr-diethyl, can be combined with one or more of the herbicides, or groups of herbicides set forth above, which then can be formulated in a variety of ways, dependent on the biological and/or chemical-physical parameters of the herbicides (column 5, lines 40-44 and column 20, claim 28). Therefore, the selection for the compound of formula (I) and herbicide are dependent on the nature of the plants

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to be treated, and they can be determined for each individual case by appropriate experiments (column 5, lines 20-24).

***Ascertainment of the difference between the prior art and the claims  
(MPEP 2141.02)***

Rosch et al. do not expressly teach the method set forth above is used for increasing weed control of the aryloxyphenoxypropionate herbicide, as instantly claimed.

However, Rosch et al. teach that the utility of the compounds of formula (I) is useful for protecting crop plants (such as cash crops wheat and rice) against phytotoxic secondary effects of the herbicides, as those set forth above, such that the field of application of these herbicides can be expanded for selective weed control in those useful crop plants (see column 3, line 48-61; column 5, lines 25-27, 28-32; column 12, lines 52-53), as evidenced by Davies, J. (The article of Safeners, Pesticide Outlook, February 2001, page 10-15).

Davies, J. discloses that herbicide safeners selectively protect crop plants from herbicide damage without reducing activity in target weed species. They are used to improve herbicide selectivity between crop and weed species and can be applied either as a mixture with the herbicide or can be applied separately with the herbicide. Davies, J. also discloses that herbicide safeners improve crop tolerance to herbicides, and provides a flexible method of improving herbicide selectivity for weed control (page 10: left column, section of: What is a herbicide safener; page 14, section of: Conclusion).

***Finding of prima facie obviousness Rational and Motivation  
(MPEP 2142-2143)***

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It would have been obvious to a person of ordinary skill in the art at the time the invention was made to follow the guidance of Rosch et al. to arrive at the instant invention.

One of ordinary skill would have been motivated to do so because Rosch et al. teach the method of employing a safener, i.e. mefenpyr-diethyl (the instantly claimed compound B), to reduce the phytotoxicity of the herbicides toward the useful crop plants, and at the same time, without impairing the effectiveness of the herbicides against harmful plants. Therefore, the teaching of Rosch et al. suggest the utilization of the safener, i.e. mefenpyr-diethyl, with the conventional herbicides set forth above would help to expand the field of application of these herbicides to more types of useful crops and plants, and thus, would widen the spectrum of the weeds or undesirable plants that can be controlled, as suggested by Rosch et al. and as evidenced by Davies, J.

From the teaching of the reference, one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

### ***Conclusion***

No claims are allowed.

### ***Contact Information***

Any inquiry concerning this communication from the Examiner should direct to Helen Mei-Ping Chui whose telephone number is 571-272-9078. The examiner can normally be reached



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on Monday-Thursday (7:30 am – 5:00 pm). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where the application or proceeding is assigned is 571-273-8300.

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/H. C./

Examiner, Art Unit 1616

/Johann R. Richter/

Supervisory Patent Examiner, Art Unit 1616